Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Original) A method of preventing or treating a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, the method comprising

administering an effective regime of an agent that induces an immunogenic response against alpha-synuclein to a patient.

2. (Original) The method of claim 1, wherein the immunogenic response comprises antibodies to alpha synuclein.

3. (Original) The method of claim 1, wherein the agent is alpha-synuclein.

4. (Original) The method of claim 1, wherein the agent is an immunogenic fragment of alpha-synuclein.

5. (Original) The method of claim 4, wherein the immunogenic fragment is amino acid residue 35-65 of alpha-synuclein (SEQ ID NO: 1).

6. (Original) The method of claim 4, wherein the immunogenic fragment comprises amino acid residues 130-140 of alpha-synuclein (SEQ ID NO: 1) and has fewer than 40 amino acids total.

7. (Original) The method of claim 4, wherein the C-terminal amino acid of the fragment is the C-terminal amino acid of alpha-synuclein.

8. (Original) The method of claim 1, further comprising determining that a patient is suffering from or at risk of a disease characterized by Lewy bodies, wherein the determining step occurs before the administration step.

9. (Original) The method of claim 8, wherein the determining step determines that a patient is suffering from a clinical symptom of a disease characterized by Lewy bodies.

10. (Original) The method of claim 8 or 9, further comprising determining the patient is free of clinical symptoms of a disease characterized by amyloid deposits of Aβ.

11. (Original) The method of claim 3, wherein the alpha-synuclein is administered with an adjuvant.

12. (Original) The method of claim 4, wherein the immunogenic alpha-synuclein fragment is administered with an adjuvant.

13. (Original) The method of claim 3, wherein the alpha-synuclein is linked to a carrier molecule to form a conjugate.

14. (Original) The method of claim 13, wherein the alpha-synuclein is linked to the carrier molecule at the N-terminus of the alpha-synuclein.

15. (Original) The method of claim 4, wherein the immunogenic alpha-synuclein fragment is linked to a carrier molecule to form a conjugate.

16. (Original) The method of claim 15, wherein the immunogenic alpha-synuclein fragment is linked to the carrier molecule at the N-terminus of the immunogenic alpha-synuclein fragment.

17. (Original) The method of claim 1, wherein the agent is an antibody to alpha-synuclein or a fragment thereof.

18. (Original) The method of claim 17, wherein the antibody is a humanized antibody.

19. (Original) The method of claim 17, wherein the antibody is human

20. (Original) The method of claim 18 or 19, wherein the antibody is an antibody of human IgG1 isotype.

21. (Original) The method of claim 17, wherein the antibody is a monoclonal antibody.

22. (Original) The method of claims 17, wherein the antibody is a polyclonal antibody.

23. (Original) The method of claim 17, wherein the antibody is prepared from a human immunized with alpha-synuclein peptide.

24. (Original) The method of claim 23, wherein the human is the patient to be treated with antibody.

25. (Original) The method of claim 17 or 18, wherein the antibody is administered with a pharmaceutical carrier as a pharmaceutical composition.

26. (Original) The method of claim 17, wherein the antibody is administered at a dosage of 0.0001 to 100 mg/kg, preferably, at least 1 mg/kg body weight antibody.

27. (Original) The method of claim 17, wherein the antibody is administered in multiple dosages over a prolonged period, for example, of at least six months.

28. (Original) The method of claim 17, wherein the antibody is administered as a sustained release composition.

29. (Original) The method of claim 17, wherein the antibody is administered intraperitoneally, orally, subcutaneously, intracranially, intramuscularly, topically, intranasally or intravenously.

30. (Original) The method of claim 17, wherein the antibody is administered by administering a polynucleotide encoding at least one antibody chain to the patient.

31. (Original) The method of claim 30, wherein the polynucleotide is expressed to produce the antibody chain in the patient.

32. (Original) The method of claim 31, wherein the polynucleotide encodes heavy and light chains of the antibody and the polynucleotide is expressed to produce the heavy and light chains in the patient.

33. (Original) The method of claim 17, further comprising monitoring the patient for level of administered antibody in the blood of the patient.

34. (Original) The method of claim 17, wherein the antibody is internalized within neuronal cells having Lewy bodies thereby dissipating the Lewy bodies.

35. (Original) The method of claim 17, wherein the antibody binds to the outer surface of neuronal cells having Lewy bodies thereby dissipating the Lewy bodies.

36. (Original) The method of any one of claims 1-4 or 17, further comprising administering to the patient an effective regime of an agent that induces an immunogenic response against Aβ.

37. (Original) The method of claim 36, wherein the agent is Aβ or an immunogenic fragment thereof.

38. (Original) The method of claim 36, wherein the agent is an antibody to Aβ or a fragment thereof.

39. (Original) The method of claim 36, wherein the disease is Parkinson's disease.

40. (Original) The method of claim 36, wherein the patient is free of Alzheimer's disease and has no risk factors thereof.

41. (Currently Amended) A method of ~~preventing or~~ therapeutically treating a patient suffering from a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, the method comprising

administering to the patient an effective regime of an agent that induces an immunogenic response against Aβ ~~to a~~ in the patient and thereby therapeutically treating the disease.

42. (Original) The method of claim 41, wherein the agent is Aβ or an immunogenic fragment thereof.

43. (Original) The method of claim 41, wherein the agent is an antibody to Aβ or a fragment thereof.

44. (Currently Amended) A method of ~~preventing or~~ therapeutically treating a patient suffering from a disease characterized by Lewy bodies or alpha synuclein deposits in the brain, comprising

administering to the patient an effective regime of an agent that induces an immunogenic response against alpha-synuclein and an agent that induces an immunogenic response against Aβ ~~to a~~ in the patient and thereby therapeutically treating the disease.

45. (Currently Amended) The method of claim ~~1 or~~ 41, wherein the agent is administered peripherally.

46. (Currently Amended) The method of claim ~~1 or~~ 41, wherein the effective regime comprises administering multiple dosages over a period of at least six months.

47. (Currently Amended) The method of claim ~~1 or~~ 41, wherein the patient is asymptomatic.

48. (Currently Amended) The method of claim ~~1 or~~ 41, wherein the patient has a risk factor for the disease.

49. (Canceled)

50. (Currently Amended) The method of claim ~~49~~ 41, wherein the disease is Parkinson's disease.

51. (Original) The method of claim 50, wherein the patient has Parkinson's disease and the administering results in improvement in a sign or symptom of Parkinson's disease.

52. (Original) The method of claim 50, wherein the patient has Parkinson's disease, and the administering improves motor characteristics of the patient.

53. (Currently Amended) The method of claim ~~1 or~~ 41, further comprising monitoring a sign or symptom of Parkinson's disease in the patient.

54. (Currently Amended) The method of claim ~~1 or~~ 41, wherein the patient is free of Alzheimer's disease.

55. (Original) The method of claim 54, wherein the patient is free of Alzheimer's disease and has no risk factors thereof.

56. (Original) A pharmaceutical composition comprising an agent effective to induce an immunogenic response against a component of a Lewy body in a patient.

57. (Original) The pharmaceutical composition of claim 56, wherein the agent is an antibody specific for a component of a Lewy body.

58. (Original) The pharmaceutical composition of claim 56, wherein the agent is alpha-synuclein, an immunogenic alpha-synuclein fragment, 6CHC-1, or an immunogenic 6CHC-1 fragment.

59. (Original) The pharmaceutical composition of claim 56, wherein the agent is an immunogenic alpha-synuclein fragment.

60. (Original) The pharmaceutical composition of claim 59, wherein the immunogenic alpha-synuclein fragment is NAC.

61. (Original) The pharmaceutical composition of claim 56, further comprising a pharmaceutically acceptable adjuvant.

62. (Original) A method of screening an antibody for activity in preventing or treating a disease associated with Lewy bodies, comprising

contacting a neuronal cell expressing synuclein with the antibody;

determining whether the contacting reduces synuclein deposits in the cells compared with a control cells not contacted with the antibody.

63. (Original) A method of screening an antibody for activity in treating or preventing a Lewy body disease in the brain of a patient, comprising contacting the antibody with a polypeptide comprising at least five contiguous amino acids of alpha-synuclein; and

determining whether the antibody specifically binds to the polypeptide, specific binding providing an indication that the antibody has activity in treating the disease.

64. (Original) A method of screening an agent to determine whether the agent has activity useful in treating a disease characterized by Lewy Bodies, comprising

contacting the agent with a transgenic nonhuman animal disposed to develop a characteristic of a Lewy Body disease with the agent;

determining whether the agent affects the extent or rate of development of the characteristic relative to a control transgenic nonhuman animal;

wherein the agent is an immunogenic fragment of alpha synuclein or an antibody to alpha synuclein.

65. (Original) The method of claim 64, wherein the transgenic nonhuman animal comprises a transgene expressing alpha-synuclein.

66. (Original) The method of claim 65, wherein the alpha synuclein transgene is full length alpha synuclein.

67. (Original) The method of claim 64, wherein the transgenic nonhuman animal further comprises a transgene expressing amyloid precursor protein.

68. (Original) The method of claim 36, wherein the administering of the agent inducing an immunogenic response to alpha-synuclein and the agent inducing an immunogenic response to Aβ is simultaneous, separate, or sequential.

69. (Original) The pharmaceutical composition of claims 56, wherein the agent is linked to a carrier molecule to from a conjugate.

70. (Original) The pharmaceutical composition of claims 56, further comprising an agent effective to induce an immunogenic response against Aβ.

71. (New) A method of prophylactically treating a patient susceptible to a disease characterized by Lewy bodies or alpha-synuclein aggregation in the brain, the method comprising

administering to the patient an effective regime of an agent that induces an immunogenic response against Aβ in the patient and thereby effecting prophylaxis of the disease.

72. (New) The method of claim 71, wherein the agent is Aβ or an immunogenic fragment thereof.

73. (New) The method of claim 71, wherein the agent is an antibody to Aβ or a fragment thereof.

74. (New) A method of prophylactically treating a patient susceptible to a disease characterized by Lewy bodies or alpha synuclein deposits in the brain, comprising

administering to the patient an effective regime of an agent that induces an immunogenic response against alpha-synuclein and an agent that induces an immunogenic response against Aβ in the patient and thereby effecting prophylaxis of the disease.

75. (New) The method of claim 71, wherein the agent is administered peripherally.

76. (New) The method of claim 71, wherein the effective regime comprises administering multiple dosages over a period of at least six months.

77. (New) The method of claim 71, wherein the patient is asymptomatic.

78. (New) The method of claim 77, wherein the patient has a risk factor for the disease.

79. (New) The method of claim 71, wherein the patient is free of Alzheimer's disease.

80. (New) The method of claim 79, wherein the patient is free of Alzheimer's disease and has no risk factors thereof.